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# Constructing an automorphic form from the orbit of a transformation

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## Abstract

We consider the Fuchsian groups of linear-fractional transformations. We propose a new method for presenting automorphic forms as gap series over an appropriate subset of transformations of the group which is not a subgroup. Comparative analysis of the Poincaré theta-series and gap series demonstrates that the use of gap series requires less transformations and parameters that the summands of series depend on. © 2007 Springer Science+Business Media, Inc.

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## Keywords

Fuchsian group of linear-fractional transformations, Poincaré theta-series